# Chapter 16
Layer 2 Virtual Circuit Overview

A Layer 2 circuit is a point-to-point Layer 2 connection transported by means of Multiprotocol Label Switching (MPLS) or another tunneling technology on the service provider's network. A Layer 2 circuit is similar to a circuit cross-connect (CCC) except that multiple Layer 2 circuits can be transported over a single label-switched path (LSP) tunnel between two provider edge (PE) routers. In contrast, each CCC requires a dedicated LSP.

The JUNOS software implementation of Layer 2 virtual circuits supports only the remote form of a Layer 2 circuit; that is, a connection from a local customer edge (CE) router to a remote CE router. Figure 43 illustrates the components of a Layer 2 virtual circuit.

Figure 43: Components of a Layer 2 Virtual Circuit
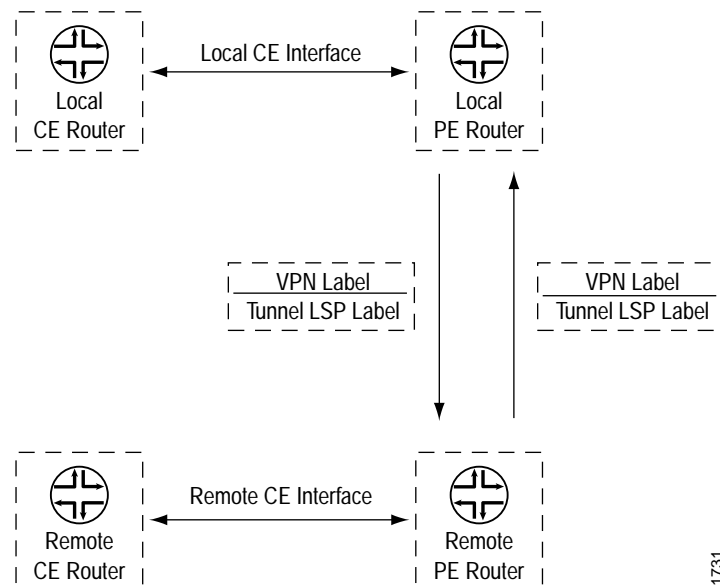
The interfaces shown in Figure 43 are logical interfaces. Packets are sent to the remote CE router using an egress virtual private network (VPN) label advertised by the remote PE router. The VPN label transits over either a Resource Reservation Protocol (RSVP) or a Label Distribution Protocol (LDP) LSP (or other type) tunnel to the remote PE router connected to the remote CE router. Return traffic sent from the remote CE router to the local CE router uses an ingress VPN label advertised by the local PE router, which again transits over an RSVP and LDP LSP to the local PE router from the remote PE router. LDP is the signaling protocol used for advertising VPN labels.

For more information on Layer 2 circuits, see *Transport of Layer 2 Frames Over MPLS*, Internet draft draft-martini-l2circuit-trans-mpls-07.txt. This draft is available on the IETF web site at http://www.ietf.org/.